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| True / False |

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| 1. A view is a virtual table based on a SELECT query.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-5 Virtual Tables: Creating a View | | *LEARNING OBJECTIVES:* | 08.05 - Use SQL to create database views, including updatable views | |

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| 2. A sequence is not associated with a table and can be dropped from a database with a DROP SEQUENCE command.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-6 Sequences | | *LEARNING OBJECTIVES:* | 08.05 - Use SQL to create database views, including updatable views | |

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| 3. To remedy the lack of procedural functionality in SQL, and to provide some standardization within the many vendor offerings, the SQL-99 standard defined the use of persistent stored modules.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7 Procedural SQL | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 4. SQL supports the conditional execution of procedures (IF-THEN-ELSE statements) that are typically supported by a programming language.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Difficulty: Moderate | | *REFERENCES:* | 8-7 Procedural SQL | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 5. A persistent stored module is stored and executed on the database client machine.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7 Procedural SQL | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 6. Every PL/SQL block must be given a name.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7 Procedural SQL | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 7. In Oracle, you can use the SQL\*Plus command SHOW ERRORS to help you diagnose errors found in PL/SQL blocks.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Difficulty: Moderate | | *REFERENCES:* | 8-7 Procedural SQL | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 8. The most useful feature of PL/SQL blocks is that they let a designer create code that can be named, stored, and executed by the DBMS.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7 Procedural SQL | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 9. Automating business procedures and automatically maintaining data integrity and consistency are trivial in a modern business environment.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7a Triggers | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 10. The DECLARE section in the trigger is used to declare any variables used inside the trigger code.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7a Triggers | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 11. A trigger is procedural SQL code that is automatically invoked by the RDBMS upon the occurrence of a given data manipulation event.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7a Triggers | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 12. Triggers can only be used to update table values.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7a Triggers | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 13. A statement-level trigger is assumed if a designer omits the FOR EACH ROW keywords.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7a Triggers | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 14. A row-level trigger is assumed if we omit the FOR EACH ROW keywords and a statement-level trigger required the use of the FOR EACH ROW keyword.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Difficulty: Moderate | | *REFERENCES:* | 8-7a Triggers | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 15. MySQL allows multiple triggering conditions per trigger.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7a Triggers | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 16. BEFORE means before the changes are made in memory but after the changes are permanently saved to disk.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7a Triggers | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 17. Just like database triggers, stored procedures are stored in the database.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7b Stored Procedures | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 18. One of the major advantages of stored procedures is that they can be used to encapsulate and represent business transactions.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7b Stored Procedures | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 19. Stored procedures must have at least one argument.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Difficulty: Moderate | | *REFERENCES:* | 8-7b Stored Procedures | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 20. An explicit cursor must return two or more rows.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7c PL/SQL Processing with Cursors | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| Multiple Choice |

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| 21. When you create a new database, the RDBMS automatically creates the data \_\_\_\_\_ tables in which to store the metadata and creates a default database administrator.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | index | b. | chapter | |  | c. | dictionary | d. | appendix |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-1b Creating the Database | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 22. Which SQL format would be best used for a small, numeric data type?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | INTEGER | b. | SMALLINT | |  | c. | NUMERIC(L,D) | d. | CHAR(L) |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Difficulty: Moderate | | *REFERENCES:* | 8-1d Data Types | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 23. When writing SQL table-creating command sequences, the entire table definition is enclosed in \_\_\_\_\_.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | asterisks | b. | commas | |  | c. | quotations | d. | parentheses |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-2a CREATE TABLE command | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 24. The \_\_\_\_\_ specification creates an individual index on a respective attribute; use it to avoid having duplicated values in a column.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | UNIQUE | b. | NOT NULL | |  | c. | UPDATE | d. | VARCHAR |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-2a CREATE TABLE command | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 25. Words used by a system that cannot be used for any other purpose are called \_\_\_\_\_ words. For example, in Oracle SQL, the word INITIAL cannot be used to name tables or columns.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | reserved | b. | unique | |  | c. | null | d. | character |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-2a CREATE TABLE command | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 26. You cannot have an invalid entry in the foreign key column; at the same time, you cannot delete a vendor row as long as a product row references that vendor. This is known as \_\_\_\_\_.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | batch updating | b. | referential integrity | |  | c. | authentication | d. | cross joining |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-2a CREATE TABLE command | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 27. The \_\_\_\_\_ constraint assigns a value to an attribute when a new row is added to a table.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | NOT NULL | b. | CASCADE | |  | c. | UNIQUE | d. | DEFAULT |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-2b SQL Constraints | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 28. The \_\_\_\_\_ constraint is used to validate data when an attribute value is entered.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | UNIQUE | b. | CASCADE | |  | c. | CHECK | d. | SET NULL |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-2b SQL Constraints | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 29. The CREATE TABLE command lets you define constraints when you use the CONSTRAINT keyword, known as a(n) *\_\_\_\_\_* constraint*.*   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | column | b. | table | |  | c. | index | d. | cell |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-2b SQL Constraints | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 30. Using the \_\_\_\_\_ command, SQL indexes can be created on the basis of any selected attribute.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | CREATE INDEX | b. | UPDATE CASCADE | |  | c. | SELECT | d. | VARCHAR |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-2d SQL Indexes | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 31. All changes in a table structure are made using the \_\_\_\_\_ TABLE command, followed by a keyword that produces the specific changes a user wants to make.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ALTER | b. | COMMIT | |  | c. | UPDATE | d. | ROLLBACK |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-3 Altering Table Structures | | *LEARNING OBJECTIVES:* | 08.03 - Manipulate the structure of existing tables to add, modify, and remove columns and constraints | |

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| 32. A table can be deleted from the database by using the \_\_\_\_\_ TABLE command.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | DROP | b. | DELETE | |  | c. | MODIFY | d. | ERASE |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-3e Deleting a Table from the Database | | *LEARNING OBJECTIVES:* | 08.03 - Manipulate the structure of existing tables to add, modify, and remove columns and constraints | |

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| 33. SQL requires the use of the \_\_\_\_\_ command to enter data into a table.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | INSERT | b. | SELECT | |  | c. | COMMIT | d. | NOT NULL |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-4a Adding Table Rows | | *LEARNING OBJECTIVES:* | 08.04 - Use SQL to do data manipulation (insert, update, and delete rows of data) | |

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| 34. The \_\_\_\_\_ command permanently saves all changes—such as rows added, attributes modified, and rows deleted—made to any table in the database.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | COMMIT | b. | SELECT | |  | c. | ROLLBACK | d. | UPDATE |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-4c Saving Table Changes | | *LEARNING OBJECTIVES:* | 08.04 - Use SQL to do data manipulation (insert, update, and delete rows of data) | |

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| 35. Which command would be used to delete the table row where the P\_CODE is 'BRT-345'?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | DELETE FROM      PRODUCT  WHERE                   P\_CODE = 'BRT-345'; | b. | REMOVE FROM        PRODUCT  WHERE                       P\_CODE = 'BRT-345'; | |  | c. | ERASE FROM        PRODUCT  WHERE                   P\_CODE = 'BRT-345'; | d. | ROLLBACK FROM   PRODUCT  WHERE                      P\_CODE = 'BRT-345'; |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Difficulty: Moderate | | *REFERENCES:* | 8-4e Deleting Table Rows | | *LEARNING OBJECTIVES:* | 08.04 - Use SQL to do data manipulation (insert, update, and delete rows of data) | |

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| 36. When a user issues the DELETE FROM tablename command without specifying a WHERE condition, \_\_\_\_\_.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | no rows will be deleted | b. | the first row will be deleted | |  | c. | the last row will be deleted | d. | all rows will be deleted |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-4e Deleting Table Rows | | *LEARNING OBJECTIVES:* | 08.04 - Use SQL to do data manipulation (insert, update, and delete rows of data) | |

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| 37. The \_\_\_\_\_ command is used to restore the database to its previous condition.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ROWCOUNT | b. | BACKUP | |  | c. | COMMIT | d. | ROLLBACK |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-4f Restoring Table Contents | | *LEARNING OBJECTIVES:* | 08.04 - Use SQL to do data manipulation (insert, update, and delete rows of data) | |

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| 38. The tables on which a view, or a virtual table derived from a SELECT query, are based are called \_\_\_\_\_ tables.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | indexed | b. | core | |  | c. | relation | d. | base |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-5 Virtual Tables: Creating a View | | *LEARNING OBJECTIVES:* | 08.05 - Use SQL to create database views, including updatable views | |

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| 39. The Oracle equivalent to an MS Access AutoNumber is a(n) \_\_\_\_\_.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | auto-number | b. | sequence | |  | c. | TO\_NUMBER function | d. | trigger |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-6 Sequences | | *LEARNING OBJECTIVES:* | 08.05 - Use SQL to create database views, including updatable views | |

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| 40. Which statement describes a feature of Oracle sequences?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | Oracle sequences are tied to columns and tables. | b. | Oracle sequences generate a character string that can be assigned to tables. | |  | c. | An Oracle sequence uses the identity column property to automatically number rows. | d. | Dropping a sequence does not delete values assigned to table attributes; it deletes only the sequence object from the database. |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-6 Sequences | | *LEARNING OBJECTIVES:* | 08.05 - Use SQL to create database views, including updatable views | |

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| 41. The \_\_\_\_\_ pseudo-column is used to select the next value from a sequence.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | CURRVAL | b. | NEXTVAL | |  | c. | NEXT | d. | GET\_NEXT |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-6 Sequences | | *LEARNING OBJECTIVES:* | 08.05 - Use SQL to create database views, including updatable views | |

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| 42. In Oracle, \_\_\_\_\_ retrieves the current value of a sequence.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | NEXTVAL | b. | CURRVAL | |  | c. | VARCHAR | d. | VARCHAR2 |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-6 Sequences | | *LEARNING OBJECTIVES:* | 08.05 - Use SQL to create database views, including updatable views | |

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| 43. In Oracle, \_\_\_\_\_ make(s) it possible to merge SQL and traditional programming constructs, such as variables, conditional processing (IF-THEN-ELSE), basic loops (FOR and WHILE loops,) and error trapping.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | dynamic SQL | b. | stored procedures | |  | c. | embedded SQL | d. | Procedural Language SQL |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7 Procedural SQL | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 44. A \_\_\_\_\_ is a block of code containing standard SQL statements and procedural extensions that is stored and executed at the DBMS server.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | cursor-style process | b. | statement-level trigger | |  | c. | base table | d. | persistent storage module (PSM) |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7 Procedural SQL | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 45. The PL/SQL block starts with the \_\_\_\_\_ section.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | IS | b. | OPEN | |  | c. | DECLARE | d. | BEGIN |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Difficulty: Moderate | | *REFERENCES:* | 8-7 Procedural SQL | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 46. The Oracle string concatenation function is \_\_\_\_\_.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | CONCAT | b. | + | |  | c. | || | d. | && |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7 Procedural SQL | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 47. Oracle recommends \_\_\_\_\_ for creating audit logs.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | triggers | b. | stored procedures | |  | c. | stored functions | d. | tables |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7a Triggers | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 48. A(n) \_\_\_\_\_ cursor is automatically created in procedural SQL when the SQL statement returns only one value.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | implicit | b. | dynamic | |  | c. | explicit | d. | static |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7c PL/SQL Processing with Cursors | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 49. \_\_\_\_\_ is a cursor attribute that returns TRUE if the last FETCH returned a row, and FALSE if not.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | %ROWCOUNT | b. | %NOTFOUND | |  | c. | %FOUND | d. | %ISOPEN |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Difficulty: Moderate | | *REFERENCES:* | 8-7c PL/SQL Processing with Cursors | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 50. No matter what language you use, if it contains embedded SQL statements, it is called the \_\_\_\_\_ language.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | base | b. | static | |  | c. | host | d. | view |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-8 Embedded SQL | | *LEARNING OBJECTIVES:* | 08.07 - Create embedded SQL | |

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| 51. A(n) \_\_\_\_\_-length character data type, like VARCHAR, is typically specified with a maximum length.   |  |  | | --- | --- | | *ANSWER:* | variable | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-1d Data Types | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 52. \_\_\_\_\_ is the process the DBMS uses to verify that only registered users access the database.   |  |  | | --- | --- | | *ANSWER:* | Authentication | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-1b Creating the Database | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 53. A(n) \_\_\_\_\_ is a logical group of database objects, such as tables and indexes, that are related to each other.   |  |  | | --- | --- | | *ANSWER:* | schema | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-1c The Database Schema | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 54. U.S. state abbreviations are always two characters, so \_\_\_\_\_(2) is a logical choice for the data type representing a state column.   |  |  | | --- | --- | | *ANSWER:* | CHAR | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-1d Data Types | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 55. The SQL data type DATE stores date in the \_\_\_\_\_ date format.   |  |  | | --- | --- | | *ANSWER:* | Julian | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-1d Data Types | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 56. To make the SQL code more \_\_\_\_\_, most SQL programmers use one line per column (attribute) definition.   |  |  | | --- | --- | | *ANSWER:* | readable | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-2a CREATE TABLE command | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 57. In a 1:M relationship, a user must always create the table for the "\_\_\_\_\_" side first.   |  |  | | --- | --- | | *ANSWER:* | 1  one  ​ | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-2a CREATE TABLE command | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 58. \_\_\_\_\_ words are words used by SQL to perform specific functions.   |  |  | | --- | --- | | *ANSWER:* | Reserved | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-2a CREATE TABLE command | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 59. If the NOT NULL and UNIQUE specifications are not supported when using a command sequence, use \_\_\_\_\_ without the specifications.   |  |  | | --- | --- | | *ANSWER:* | PRIMARY KEY | | *DIFFICULTY:* | Difficulty: Moderate | | *REFERENCES:* | 8-2a CREATE TABLE command | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 60. A common practice is to create a(n) \_\_\_\_\_ on any field that is used as a search key, in comparison operations in a conditional expression, or when a user wants to list rows in a specific order.   |  |  | | --- | --- | | *ANSWER:* | index | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-2d SQL Indexes | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 61. To delete an index, one must use the \_\_\_\_\_ command.   |  |  | | --- | --- | | *ANSWER:* | DROP INDEX | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-2d SQL Indexes | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 62. If a user adds a new column to a table that already has rows, the existing rows will default to a value of \_\_\_\_\_ for the new column.   |  |  | | --- | --- | | *ANSWER:* | null | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-3c Adding a Column | | *LEARNING OBJECTIVES:* | 08.03 - Manipulate the structure of existing tables to add, modify, and remove columns and constraints | |

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| 63. A table can be deleted from the database by using the \_\_\_\_\_ command.   |  |  | | --- | --- | | *ANSWER:* | DROP TABLE | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-3e Deleting a Table from the Database | | *LEARNING OBJECTIVES:* | 08.03 - Manipulate the structure of existing tables to add, modify, and remove columns and constraints | |

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| 64. In an INSERT command, a user can indicate just the attributes that have required values by listing the \_\_\_\_\_ inside parentheses after the table name.   |  |  | | --- | --- | | *ANSWER:* | names | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-4a Adding Table Rows | | *LEARNING OBJECTIVES:* | 08.03 - Manipulate the structure of existing tables to add, modify, and remove columns and constraints | |

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| 65. A(n) \_\_\_\_\_ routine pools multiple transactions into a single batch to update a master table field in a single operation.   |  |  | | --- | --- | | *ANSWER:* | batch update | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-5a Updatable Views | | *LEARNING OBJECTIVES:* | 08.05 - Use SQL to create database views, including updatable views | |

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| 66. A(n) \_\_\_\_\_ view is a view that can be used to update attributes in the base table(s) that are used in the view.   |  |  | | --- | --- | | *ANSWER:* | updatable | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-5a Updatable Views | | *LEARNING OBJECTIVES:* | 08.05 - Use SQL to create database views, including updatable views | |

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| 67. In MS Access, a designer can use the \_\_\_\_\_ data type to define a column in his table that will be automatically populated with unique numeric values.   |  |  | | --- | --- | | *ANSWER:* | AutoNumber | | *DIFFICULTY:* | Difficulty: Moderate | | *REFERENCES:* | 8-6 Sequences | | *LEARNING OBJECTIVES:* | 08.05 - Use SQL to create database views, including updatable views | |

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| 68. Using Oracle \_\_\_\_\_, a designer can write a PL/SQL code block by enclosing the commands inside BEGIN and END clauses.   |  |  | | --- | --- | | *ANSWER:* | SQL\*Plus | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-7 Procedural SQL | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 69. A row-level trigger requires use of the \_\_\_\_\_ keywords and is executed once for each row affected by the triggering statement.   |  |  | | --- | --- | | *ANSWER:* | FOR EACH ROW | | *DIFFICULTY:* | Difficulty: Moderate | | *REFERENCES:* | 8-7a Triggers | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 70. \_\_\_\_\_ is the term used to describe an environment in which the SQL statement is not known in advance and is generated at run time.   |  |  | | --- | --- | | *ANSWER:* | Dynamic SQL | | *DIFFICULTY:* | Difficulty: Easy | | *REFERENCES:* | 8-8 Embedded SQL | | *LEARNING OBJECTIVES:* | 08.07 - Create embedded SQL | |

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| 71. What is a schema? How many schemas can be used in one database?   |  |  | | --- | --- | | *ANSWER:* | In the SQL environment, a schema is a logical group of database objects—such as tables and indexes—that are related to each other. Usually, the schema belongs to a single user or application. A single database can hold multiple schemas that belong to different users or applications. Schemas are useful in that they group tables by owner (or function) and enforce a first level of security by allowing each user to see only the tables that belong to that user. | | *DIFFICULTY:* | Difficulty: Moderate | | *REFERENCES:* | 8-1c The Database Schema | | *LEARNING OBJECTIVES:* | 08.01 - Use SQL to create a table manually | |

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| 72. How can a table be deleted from the database? Provide an example.   |  |  | | --- | --- | | *ANSWER:* | A table can be deleted from the database using the DROP TABLE command. For example, a user can delete the PART table with the following command:  ​  DROP TABLE PART;  ​  The user can drop a table only if it is not the “one” side of any relationship. If the user tries to drop a table otherwise, the RDBMS will generate an error message indicating that a foreign key integrity violation has occurred.  ​ | | *DIFFICULTY:* | Difficulty: Moderate | | *REFERENCES:* | 8-3e Deleting a Table from the Database | | *LEARNING OBJECTIVES:* | 08.04 - Use SQL to do data manipulation (insert, update, and delete rows of data) | |

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| 73. Which command is used to save changes to the database? What is the syntax for this command?   |  |  | | --- | --- | | *ANSWER:* | Any changes made to the table contents are not saved on disk until a user closes the database, closes the program he or she is using, or uses the COMMIT command. If the database is open and a power outage or some other interruption occurs before the user issues the COMMIT command, the user's changes will be lost and only the original table contents will be retained.  ​  The COMMIT command permanently saves all changes—such as rows added, attributes modified, and rows deleted— made to any table in the database.  ​  The syntax for the COMMIT command is:  COMMIT [WORK]  ​ | | *DIFFICULTY:* | Difficulty: Moderate | | *REFERENCES:* | 8-4c Saving Table Changes | | *LEARNING OBJECTIVES:* | 08.03 - Manipulate the structure of existing tables to add, modify, and remove columns and constraints | |

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| 74. How are triggers critical to proper database operation and management?   |  |  | | --- | --- | | *ANSWER:* | - Triggers can be used to enforce constraints that cannot be enforced at the DBMS design and implementation levels.  - Triggers add functionality by automating critical actions and providing appropriate warnings and suggestions for remedial action. In fact, one of the most common uses for triggers is to facilitate the enforcement of referential integrity.  - Triggers can be used to update table values, insert records in tables, and call other stored procedures. | | *DIFFICULTY:* | Difficulty: Moderate | | *REFERENCES:* | 8-7a Triggers | | *LEARNING OBJECTIVES:* | 08.06 - Use Procedural Language SQL (PL/SQL) to create triggers, stored procedures, and PL/SQL functions | |

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| 75. Summarize the hierarchy of steps involved in creating and running an executable program with embedded SQL statements.   |  |  | | --- | --- | | *ANSWER:* | While the steps required to create and execute a program consisting of embedded SQL statements vary from one programming language to another, the following steps are considered as a general standard.    a) The programmer writes embedded SQL code within the host language instructions. The code follows the standard syntax required for host language and embedded SQL.    b) A preprocessor is used to transform the embedded SQL into specialized procedure calls that are DBMS-specific and language-specific. The preprocessor is provided by the DBMS vendor and is specific to the host language.    c) The program is compiled using the host language compiler. The compiler creates an object code module for the program containing the DBMS procedure calls.    d) The object code is linked to the respective library modules and generates the executable program. This process binds the DBMS procedure calls to the DBMS run-time libraries. Additionally, the binding process typically creates an “access plan” module that contains instructions to run the embedded code at run time.    e) The executable is run, and the embedded SQL statement retrieves data from the database. | | *DIFFICULTY:* | Difficulty: Moderate | | *REFERENCES:* | 8-8 Embedded SQL | | *LEARNING OBJECTIVES:* | 08.07 - Create embedded SQL | |